

**REMARKS**

Claims 1-20 are all the claims pending in the application.

**I. Response to the Rejection under 35 U.S.C. § 103**

Claims 1-20 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hosoi et al (US 5,525,571).

Applicants respectfully traverse the rejection.

The present invention is directed to a heat-sensitive recording material comprising a support having disposed thereon a heat-sensitive recording layer including microcapsules in which an electron-donating dye precursor is encapsulated and outside which an electron-accepting compound is present. The electron-donating dye precursor is capable of reacting with the electron-accepting compound to develop color and the microcapsules comprise at least two kinds of microcapsules having different volume average particle diameters.

Hosoi (USP No. 5,525,571) teaches a heat-sensitive recording material comprising a substantially transparent support and a heat-sensitive recording layer formed on one side of the support. The recording material is adapted for thermal recording comprising image-wise applying thermal energy to the recording layer to obtain recorded areas and non-recorded areas of the recording material, wherein the thermal recording energy required for increasing the transmission density of recorded areas as measured with a Macbeth transmission densitometer TD904 (visual filter) to a value higher by 0.1 than the transmission density of non-recorded areas is from 10 mJ/mm<sup>2</sup> to 40 mJ/mm<sup>2</sup>. The energy required for obtaining a transmission density of 2.5 in recorded areas as measured with a Macbeth transmission densitometer TD904 (visual filter) is from 80 mJ/mm<sup>2</sup> to 130 mJ/zmm<sup>2</sup>". See claim 1 of Hosoi. The heat-sensitive

recording material of Hosoi may have a multilayer coating comprising two or more heat-sensitive recording layers having different recording sensitivities (lines 28-33 in column 14 of Hosoi).

However, Hosoi does not disclose, teach or suggest a heat-sensitive recording layer which includes at least two kinds of microcapsules having different volume average particle diameters. Example 1 of Hosoi teaches a recording material which has a heat-sensitive recording layer containing "microcapsule dispersion A" having an average particle diameter of 0.7  $\mu\text{m}$  and "microcapsule dispersion B" having an average particle diameter of 0.7  $\mu\text{m}$  and another heat-sensitive recording layer containing the "microcapsule dispersion A" as a sole microcapsule dispersion. Thus, Hosoi does not teach or suggest all elements of the present claims.

Further, there is no motivation for one of ordinary skill in the art to modify Hosoi with a reasonable expectation of achieving the present invention.

Also, the present invention provides unexpectedly superior results when compared to the prior art that can be attributed to the two kinds of microcapsules having different average particle diameters as is shown by the attached Declaration under 37 C.F.R. § 1.132. Based on the comparative data provided in the Declaration, it is apparent that Hosoi does not disclose the features or effects of the present invention. Thus, the present invention is not rendered obvious by Hosoi.

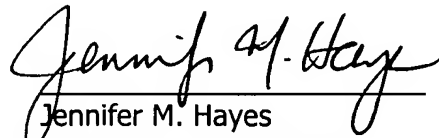
Accordingly, Applicants respectfully request withdrawal of the rejection.

## **II. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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